PROTECTING THE COMMON HERITAGE OF ANTARCTICA

As the United Nations General Assembly gears up for its annual debate on the question of Antarctica, scientific observation confirms the man-made threats to the Antarctic environment—starting with the ozone layer which shields the continent from the sun's ultraviolet rays.

One recent warning came from the World Meteorological Organization (WMO), the United Nations specialized agency engaged in monitoring the ozone layer. Upon learning of record-breaking ozone destructions over the Antarctic and Arctic, the Secretary-General of WMO, Prof. G. O. P. Obasi, appealed in March 1993 to Governments:

"To avoid conditions for the further deterioration of the ozone layer," he said, "we reiterate our plea to all Governments to implement the strengthened requirements of the Montreal Protocol and to ensure the stoppage of the production and use of ozone-destructive chloro-fluorocarbons and other related chemicals by the end of 1995, as agreed during the Copenhagen Conference of the Parties to the Protocol in November 1992."

The threat to the ozone layer is also stressed in the latest report of the Secretary-General of the United Nations on the state of the environment in Antarctica.[1] Scientific studies suggest that ozone layer depletion threatens life in the Antarctic more quickly than in other parts of the world, the report says. Recent statements from the United Nations Environment Programme indicate that increased levels of ultraviolet radiation in the Antarctic harm the productivity of flora and fauna. These studies also reveal that certain phytoplankton species have been adversely affected; thus, other species in the vast Antarctic food chain may have been affected as well.

Various scientific studies, including some conducted from satellites, are under way to examine the effects of global pollution on the Earth's ozone layer. Those studies stress that Antarctica, because of its remoteness from man-made emissions in the atmosphere and in the oceans, offers greater potential for forecasting climate changes at high latitudes. Antarctica also offers several opportunities for detecting changes in the Earth's atmosphere and for assessing the impact of pollutants of global ecosystems, says the Secretary-General's report.

HUMAN INFLUENCE

The most obvious human influence on the Antarctic environment, says the report, is through direct activities in the area itself—such as hunting, pollution and debris from research stations and ships.

Human activities have already had a major effect on the balance of the Antarctic marine ecosystem. Moreover, commercial exploitation of mineral resources might have a strong impact on the ecosystem and create irreversible damage, says the report.

But the major impacts on the Antarctic are from outside the region. Heavy metals originating elsewhere are widespread in Antarctic snow and ice, and there are radioactive layers from nuclear bomb tests; future effects of global warming (again due to human influence outside) are predicted to have severe effects on ice-shelf break-up, pack ice extent and fast ice persistence; and chloro-fluorocarbons (CFCs) introduced into the atmosphere outside the Antarctic have led to the ozone hole over the continent.

ANTARCTIC TREATY

Negotiated outside the United Nations, the 1959 Antarctic Treaty is the main international instrument governing activities on the continent.[2] Under it, Antarctica is to be used exclusively for peaceful purposes; all military activities, nuclear explosions and disposal of radioactive waste are prohibited. The Treaty—the first international agree-

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[1] A/47/624, 11 November 1992.

[2] See "Protecting the Earth's Last Great Wilderness: Antarctica", United Nations Department of Public Information, DPI/1222, August 1992.

ment to ban nuclear weapons in a specific area—establishes a demilitarized zone in the Antarctic.

States parties to the Treaty[3] signed on 3 October 1991 in Madrid an environmental protocol to the Treaty which, among other things, bans prospecting and mining in and around Antarctica for 50 years. The Protocol on Environmental Protection, which is an integral part of the Treaty, designates Antarctica as a natural reserve devoted to peace and science. It establishes a comprehensive, legally binding regime to ensure that activities undertaken by States parties are consistent with the protection of the Antarctic environment.

Gathering for the Sixteenth Antarctic Treaty Consultative Meeting (Bonn, Germany, 7-18 October 1991), States parties stressed that the Protocol on Environmental Protection should be ratified and enter into force as early as possible. The meeting also stressed the need for environmental monitoring, and recommended the monitoring of activities such as waste disposal, contamination by oil or other hazardous or toxic substances, construction and operation of stations and related facilities, science programmes, tourism and activities affecting protected areas.

The achievements of the Antarctic Treaty system are noted in a report of the Secretary-General of the United Nations on the Sixteenth Antarctic Treaty Consultative Meeting.[4] Documents submitted by States parties, the report says, "appear to reflect that the existing Antarctic Treaty system continues to foster international cooperation, to adapt to changing environmental priorities and to elaborate new mechanisms in line with innovative scientific research. They also indicate interest in renewed global efforts in line with increased public awareness, particularly as regards Antarctic ecosystems, and growing world-wide environmental concerns."

[3] The States parties are Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, China, Colombia, Cuba, Czechoslovakia, Democratic People's Republic of Korea, Denmark, Ecuador, Finland, France, Germany, Greece, Guatemala, Hungary, India, Italy, Japan, Netherlands, New Zealand, Norway, Papua New Guinea, Peru, Poland, Republic of Korea, Romania, Russian Federation, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States and Uruguay.

[4] A/47/541, 20 October 1992.

GENERAL ASSEMBLY DEBATE

The latest debate on Antarctica at the General Assembly, in November 1992, highlighted the common interest of all countries in protecting that unique ecosystem. The Assembly has been discussing the question of Antarctica since 1983. Over the years, the recognition of the importance of the Antarctic environment has increased the commitment of all countries to its preservation.

For instance, Antigua and Barbuda said the United Nations must respond to the harmful threats to the fragile environment of Antarctica posed by man. "Man's history in the pursuit of wealth has been brutish," Antigua's representative said, and there was an urgent need for the international community to act collectively to protect the world's "last continental wilderness".

Antigua and Barbuda supported the idea of a world park on the continent. Antarctica was a monitor of the health of the global environment, and acted as a giant laboratory for environmental and climatic research that could not be conducted elsewhere. It was also the world's largest wildlife sanctuary, home to over 100 million birds, seven species of penguins and six species of seals. Human activity had resulted in dramatic reductions in the population of fish stocks and in the inadvertent deaths of a vast number of seals, birds and other species. A world park would provide for environmental protection and help coordination of scientific research.

Pakistan reaffirmed its commitment to the protection and preservation of the delicate environment of Antarctica and its ecosystems. It welcomed the 50-year ban on prospecting and mining, in accordance with the Protocol on Environmental Protection, and supported efforts aimed at a permanent ban on prospecting, exploring and exploiting mineral resources.

Sri Lanka recalled the growing concern over the adverse effects that human activities could have on that irreplaceable scientific storehouse. Those effects could be aggravated by the pursuit of wealth at the expense of scientific research. Antarctica, which was described as one of the Earth's refrigerators, had become the first visible victim of the man-made refrigeration industry. The

usage of CFCs was now known to be a main reason for world-wide ozone depletion—including the ozone hole over Antarctica.

The Assembly on 9 December 1992[5] urged the international community "to ensure that all activities in Antarctica are carried out exclusively for the purpose of peaceful scientific investigation and that all such activities will ensure... the protection of the Antarctic environment".

The annual debate at the General Assembly is complemented by the action of United Nations bodies such as WMO and the United Nations Environment Programme. WMO is responsible for international coordination of the atmospheric science and systematic observation in support of the Vienna Convention for the Protection of the Ozone Layer. As the scientific voice on atmospheric issues within the United Nations family of agencies, WMO strives to improve ozone monitoring and research.

International efforts are indeed needed if Antarctica is to be preserved. As the Secretary-General's report notes, "while humankind is only at the dawn of fully understanding the whole Antarctic ecosystem, it is evident that the interplay among these systems is of prime importance to the global environment. The inaccessibility of Antarctica, the cost of scientific research and other factors amply demonstrate the need for international cooperation to safeguard the continent and its dependent ecosystems for future generations."

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[5] Resolution 47/57.

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